Chapter 3: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

3.1 Land Use

Balboa Park Master Plan

This portion of State Route 163 is within the surrounding limits of Balboa Park. Balboa Park is zoned as an urban park/open space area, which covers 567 hectares (1400 acres) and is minutes away from downtown San Diego. SR-163 serves intraregional travel by linking the adjacent surrounding communities of Hillcrest, North Park, Uptown, Mission Valley, and serves interregional travel by linking the museums, zoo, and recreational sites within Balboa Park.

The land was originally set-aside in 1868 as a park for the citizens of San Diego. The first "Park Plan" was developed in 1903. As a goal for the Balboa Park area, the current Balboa Park Master Plan (Plan) lists free and open park land as a dwindling resource which must be protected and recovered from encroaching uses whenever possible. Under the Historic Preservation component of the Plan, it is recommended that rehabilitation and new construction should respect the historical architectural character of the structures and site features within the Park. The vision for the development of Balboa Park over the next 20 years is to nurture and enhance the cultural, recreational, and passive resources of the park to meet the needs of the region and surrounding community, while respecting its physical, cultural, and historical environment (Plan 1989).

Although SR-163 within the project corridor is not specifically a part of Balboa Park, it is, nevertheless, immediately adjacent to it. Given this proximity, the proposed project includes landscaping that is compatible with and contributes to the goals of the Balboa Park Master Plan.

3.2 Visual Aesthetics

According to the California Environmental Quality Act (CEQA) policy of the State is to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities." [CA Public Resources Code Section 21001(b)]. A Visual Impact Assessment was prepared for the project in November 2003.

3.2.1 Visual Assessment Method

The Department generally follows five principal steps when conducting a visual assessment. These steps are provided below and are addressed individually.

1. Defining the project setting and viewshed.
2. Analyze existing visual resources and viewer response.
3. Identify key views for visual assessment (where appropriate).
4. Assess the visual impacts of the project elements.
5. Propose mitigation methods and measures.

Defining The Project Setting and Viewshed

The viewshed of SR-163 is comprised of two drainage canyons creating two view corridors (landscape units). The ridgelines and structures along both canyons delineate the viewshed corridor. The viewshed corridor limits are the ends of both canyons; the southern extent is near downtown San Diego while the northern extent is in Mission Valley. The viewshed corridor expands as one travels northward along SR-163 from the downtown San Diego area and approaches a divide between University and Robinson Avenues.

At the northern end of the SR-163 landscaped median, the predominant tree is Coast live oak (*Quercus agrifolia*). A mix of ornamental trees and trees native to California cover the slopes along the highway and through Balboa Park. The trees are arranged as single specimens and in groupings of same tree species (such as Redwoods, Digger Pines, Eucalyptus, and Canary Island Pines). There are a variety of ornamental shrubs and ground covers along the slopes of SR-163, which continue into Balboa Park. Some islands of shrub masses and groundcovers are within the median, although, turf is the predominate ground cover.

The vegetation of the northern canyon is typically undisturbed. Only at the north end of the corridor have the ridges been developed. The native hillside plant community is maritime chaparral. In the commercial areas, Eucalyptus trees were planted on slopes.

Between Washington Street and Robinson Avenue, the Department's right-of-way is very steep with plantings extending high above SR-163. Most of the landscaping is visible to the traveler entering or exiting SR-163 in this area. As one reaches the aforementioned divide, the landscaping is more visible along the highway. Several projects, including median planting, have occurred within this segment of SR-163 since 1999. All of these projects were landscape enhancement projects.

Dense urbanization is more pronounced at the University Avenue divide. Toward Washington Street and University Avenue, the viewshed narrows and, stating with the curve at Washington Street and continuing south to Robinson Avenue, becomes more restricted. Native vegetation along the slopes, commercial establishments along University Avenue, and residential units along the ridgeline characterize the northern viewshed canyon from University Avenue to the I-8/SR-163 interchange.

Approximately 0.4 kilometer (0.25 mile) south of the Robinson Avenue overcrossing, a planted median begins. The predominant tree in the landscaped median is California sycamore (*Platanus racemosa*).

Many of the Eucalyptus trees within the corridor are infested with Lerp Psyllid. Consequently, several mature trees were removed from the corridor and replanted with trees recommended in the CMP. The trees were planted in locations where they meet the Department's setback standard of 9 meters (30 feet) from the traveled way (Figure 16).

The canyon slopes in the southern portion are more gradual than those of the northern portion, which extends to Mission Valley. The ridgelines are less pronounced and there is denser natural landscaping. As one passes north under the historic Laurel Street Bridge, the viewshed spreads out into a green park-like landscape where the SR-163 median increases in width and the planted trees and turf come into view.

Visual Resources and Viewer Response

Visual character is descriptive and non-evaluative, which means it is based on defined attributes that are neither good nor bad. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change.

Visual Quality

Determination of visual quality involves three factors, vividness, intactness and unity. These criteria are defined as follows:

> Vividness: The visual power or memorability of landscape components as they combine in distinctive visual patterns.
>
> Intactness: The visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
>
> Unity: The visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual components in the landscape.

This segment of SR-163 rates highly in all three categories. The evaluations of the resource changes and viewer response to those changes (described below) include these elements.

Visual Impact Categories

Visual impacts can also be categorized by using four basic criteria. These range from low impacts to high impacts and are defined as follows:

> Low (L) – Minor adverse change in visual quality caused by the project only slightly affecting the resource, or the viewers are not sensitive to the change, or the viewers are at a great distance from the change. May or may not require mitigation.
>
> Moderate (M) – Moderate adverse change in visual quality caused by the project that can be mitigated by conventional landscape practices. Viewer response level is moderate. Impacts can be mitigated within three years**.**
>
> Moderately High (MH) – Major adverse change caused by the project due to major adverse visual change in the resource and high viewer response. Major landscape treatment required would generally take longer than three years to mitigate.

High (H) – Major adverse change to the resource and high viewer response caused by the project to the extent that landscape treatment cannot mitigate the impacts. An alternative project solution may be required. However, mitigation measures can be added to offset any visual impacts created. This can be accomplished by incorporating design features that analyze the context of the visual element and restore that resource to its original condition and design intent.

Methods of Predicting Viewer Response

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by the proposed project.

Viewer Sensitivity

Viewer sensitivity is defined both as the viewer's concern for scenic quality and the viewers' response to change in the visual resources that make up the view.

Viewer Exposure

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activities, the duration of their view, the speed at which the viewer moves, and the position of the viewer.

Viewer Groups

Viewer Groups can be defined as those who have a direct visual connection with the visual resource. The viewers can be classed into groups that have a common goal or directive. Viewer groups include:

- Commuters
- Commercial Users
- General Users
- Park Users
- Pedestrians
- Agencies and Community/Special Interest Groups

Identify key views for visual assessment (where appropriate).

A number of key viewpoints are selected to represent the potentially affected viewer groups. These views collectively provide a full range of viewing experiences throughout the landscape unit. Key view sites were selected based upon the potential for visual impacts due to the proposed project features.

Key View Evaluation

Frequency – This is the number of times a user group has direct visual connection. The particular user group used here is Commuters.

Distance Zone – Relates to the Foreground, Mid-ground, and Background. Most of the viewers are traveling at the speed limit 88.5 kilometers per hour (which is 55 miles per hour). Speed determines the visual parameters within which physical elements are perceived. Therefore, the most pronounced visual features along the highway would be in the Mid-ground range. Mid-ground distance for this project was determined to be approximately 0.4 to 1.2 kilometers (0.25 to 0.75 miles).

3.2.2 Evaluating Visual Impacts

The first step in determining the visual impacts of a project is to determine the visual resource change. This is accomplished by comparing existing visual quality with the projected visual quality of the viewshed after the project has been constructed.

The second step in evaluating the visual impacts is to determine viewer response to the project. Estimating viewer exposure to the project is determined by the cultural significance of the visual resources within the viewshed, and recognizing the values and goals of the community. The visual impact is then determined by combining both the effects of change in the visual quality and viewer response.

Meeting the 9.1 meters (30-foot) Set Back Requirement for planting the outside shoulders

Meeting the current 9.1 meters (30-foot) setback standard would create a high visual impact to the corridor, since the trees that do not meet this standard would not be replaced in their current location. This impact would make the corridor less "park like" by removing canopy trees that provide shade and the forest effect unique to this highway (Table 4).

Removing and Replanting Shrub and Ground Cover Areas

Replacement planting, which is plant material that is younger and smaller would leave open areas, thus changing the resource and generating a moderately high negative viewer response. This would change the character of the corridor by taking older shrubs and ground cover masses out of the landscape. This is necessary because these plants have reached maturity and show signs of decline. However, this change would be temporary and less significant due to the growth and infill of the replacement shrubs and ground covers.

Lerp Psyllid Infestation Impacts

The Lerp Psyllid infestation has dramatically affected the Eucalyptus forest population within the corridor and this infestation has been devastating to the viewshed. The visual quality of the corridor has been significantly impacted and as a result the park and highway character has changed. Some of the mature trees within the corridor were planted between 30 to 60 years ago, and existed prior to the highway construction. Again, the Lerp Psyllid infestation and the resulting conditions have created a high visual change to this resource. This infestation and natural attrition has seen removal of more than 140 trees since 2000. This reduction in the

number of trees has opened the corridor viewshed significantly revealing the park and the similarly infected areas. This has caused a high visual impact and a negative viewer response.

3.2.3 Visual Impacts

Median Barrier

The median barrier is a new permanent structure being introduced to the corridor, which would cause a high viewer response to the change in character of the resource.

Median Barrier Placement

The addition of a new element within this corridor at this scale would result in a significant change. Therefore, all placements would alter the appearance of the median and corridor. This is a new feature being introduced within the Historic District.

Alternative 1. This alternative proposes the placement of median barrier such that the face of the barrier is a minimum of 0.6-meter (2 feet) from the edge of the traveled way (ETW). The barrier would be placed along the inside Asphalt Concrete (AC) shoulders for both the northbound and southbound lanes of SR-163 and the existing ground surface under the rail would be treated to reduce the growth of vegetation near the rail.

Alternative 2. This alternative proposes the placement of a median barrier such that the face of the barrier is a minimum of 1.2 meters (4 feet) from the (ETW). The 1.2 meters shoulder would consist of the existing 0.6 meter (2 feet) AC shoulder and 0.6 meter (2 feet) of treated shoulder. The shoulder treatment would be either a soil cement or granular herbicide that would aid in reducing the growth of vegetation in front of the barrier. The barrier would be placed along the inside shoulders for both the northbound and southbound lanes of SR-163.

Alternative 3. This alternative proposes the placement of median barrier such that the face of the barrier is a minimum of 1.2 meters (4 feet) from the ETW and would provide a paved AC shoulder up to the face of the barrier. The barrier would be placed along standard inside shoulders for both the northbound and southbound lanes of SR-163. In addition, the rumble strips that are to be installed under a separate pavement rehabilitation project would be replaced in kind.

Alternative 4. No Project. This alternative would not reduce the severity of accidents in the median.

Since the resource change for all alternatives except Alternative 4 is considered high, the only difference would be in the change in location of the guardrail placement and the perception by the viewer groups.

Maintenance Access Road Rehabilitation.

The changes to the maintenance access road could create a moderately high change in the resource depending on the extent of impacts. The access road is 10 feet wide and begins at the Laurel Street Bridge, terminating just south of Robinson Street on the western side. However, this may not create significant change in the visual quality. Therefore, viewer response is anticipated to be moderately high to high.

Because all viewer groups may not view this change, depending on location and size of the path, the viewer response is moderate. It would only be higher if the width of the path were greater than one meter (3 feet).

Irrigation System

The replacement of the irrigation system during construction would involve some removal of ground covers and shrubs. Also, with heavy equipment in the area, potential visual impacts would be created. This change in corridor visual resources is considered a temporary impact that rates as moderate. After replanting of the disturbed vegetation, the overall change in the resource would be low. These impacts would generate public concern that would last throughout construction and plant establishment. This may create a moderate impact during construction, but it would become low over time.

The visual impact created by this project would be moderate (only at the time of construction). In addition to that caused by construction equipment, there would be some ground cover and shrub disturbance, however, this would fill in and recover over the course of a few months.

Retaining Wall Replacement

The retaining wall at the Robinson Street southbound ramp is located at a highly visible area. A temporary change in visual character would occur until the planting covers the new retaining wall.

Slope Paving

Any additions to or removal of elements that contribute to the Historic District would create a high visual impact since it would change the character of the resource. The visual impacts outside the Historic District would be low.

The slope paving element of the project would include all areas under the following bridges:

- Richmond Street,
- Upas Street Pedestrian Bridge,
- Robinson Street,
- Washington Street,
- Pasco Street, and
- The Sixth Avenue bridge overcrossing.

Since the bare earth in these areas is not a feature of the historic character of the roadway, this would change the resource only slightly. This change is not extensive, being limited to under bridges, but the change in the overall visual character is considered moderately high. This change would not generate a high viewer response except during construction. The overall viewer response would be moderate.

Since slope paving already exists outside the Historic Parkway/District (such as at the I-5/SR-163 interchange and at the north end exit ramps), changes to the resource are expected to be minimal. This may change the character, but only at a low to moderate level. The overall viewer response would likewise be low to moderate, however, during construction a negative viewer response can be anticipated.

Fencing Replacement

Chain link fencing commonly delineates the Department's right-of-way boundary. Much of the fencing, as indicated above, is in need of repair. Deteriorated and damaged fencing creates a negative visual impact viewed by park users and motorists. The only visual impacts created by replacing the fencing would be during construction, and especially if there were disturbance to existing plantings. Visual impacts from fence replacement are low.

Traffic Signing

Signing the Upas Street pedestrian/equestrian overcrossing with a low vertical clearance decal would be accomplished at a future time. Consideration to change the signage to reflect the highway's historic significance and location in Balboa Park would be evaluated.

Signage would be kept to a minimum within the Historic Parkway/District, and resemble signage used by the National Park Service's Parkways, or other States' parkways.

Traffic Monitoring Stations

The proposed Traffic Monitoring Stations are small additions to the corridor.

Currently traffic monitoring stations exist on northbound and southbound SR-163 near Ash Street and south of the Robinson Street Overcrossing.

One of the existing northbound monitoring stations at Ash Street is counting two lanes in lieu of one lane. The existing southbound monitoring station south of the Robinson Street Overcrossing is defective and would be replaced. Some locations, specifically the freeway-to-freeway connectors, require that hoses be laid to monitor the traffic. Due to the traffic volumes, it may take Department personnel up to four hours to lay down one hose. The placement of traffic monitoring stations would eliminate the need for this exposure to traffic.

The northbound (NB) monitoring station at Ash Street would be relocated northerly so that it counts the five individual lanes. The existing southbound (SB) monitoring station south of the Robinson Street Overcrossing does not function and would be replaced. New monitoring stations would be installed to eliminate exposing employees to traffic. The proposed locations are listed below, however, only the last two listed are within the Historic Parkway/District.

- SB 5 to NB 163 connector
- NB 5 to NB 163 connector
- Park Boulevard to NB 163
- SB 163 to NB 5 connector
- SB 163 to SB 5 connector
- SB entrance ramp from Robinson Street and
- NB exit ramp to Robinson Street

Visual impacts created by the installation of the traffic monitoring stations can generate a negative visual impact. There are two particular issues that arise. The first is the location of the stations along the roadway. If they were located close to the traveled way, they would change the character of that location. In turn, this creates a change in the resource and would create a negative viewer response. The second possible negative visual impact would be the increase in the quantity of the stations. The increase would create structural clutter within the corridor and thereby add to the degradation of its scenic qualities.

The above analysis is more severe within the Historic Parkway/District. Any new elements to this area should be avoided due to the sensitivity of the resource.

Maintenance Vehicle Pullouts (MVPs)

The addition of the MVPs would add a new feature to the Historic District. Since this change would create an adverse impact on the resource, the impact to the resource is considered moderately high.

The installation of MVPs and access gates, where possible, would make the landscape more accessible. MVPs would provide a safe place for maintenance personnel to park vehicles. MVPs would be located in areas deemed appropriate within the corridor. Their number would be kept to a minimum to avoid creating cultural and visual adverse impacts.

A similar impact would be created as that listed in the section on Slope Paving. The addition of paving within the Historic Parkway/District the change in resource character is high. This is due to the significance of the Historic Parkway/District and the elements that contribute to that significance. Like the slope paving, the proposed MVPs are not an original element of the corridor. Though the scale, location, and size of the MVP's are not extensive, they would remove landscaping from the Historic District, add paving, and add to the cumulative removal of landscaping from the Historic Parkway. Because the addition of these elements to the corridor are not as extensive as adding such things as the proposed median barrier, the visual impacts are not as extensive. The level of the resource change is rated as moderately high.

Areas outside the Historic Parkway/District would not generate a high viewer response to the change in the resources. The impacts would be similar to the installation of slope paving, due

mainly to the inconvenience to the highway traveler during construction. This would generate a negative viewer response. However, in general and after construction, this impact would be moderate and only relate to the actual addition of the maintenance vehicle pullouts.

Pavement Removal at Abandoned Ramp

The abandoned lanes at the exit ramp from SR-163 to southbound I-5 transition ramps are not within the Historic District and are therefore not considered a part of the visual and historical resource. Their removal is considered to have a low impact on the resource.

The following is a list of structures and facilities that have been abandoned and are no longer serve as a function of the freeway.

1. Richmond Street southbound entrance ramp.

   No project actions are proposed at this abandoned ramp location.

2. Quince Street southbound entrance ramp.

   No project actions are proposed at this abandoned ramp location.

3. Abandoned lanes at the exit ramp from 163 southbound to the I-5 transition ramps.

   The pavement on the abandoned lanes at the southbound exit ramp to I-5 can be removed leaving enough space for maintenance needs. The concrete can be removed and the area can be planted. This site is outside the Historic Parkway/District.

The viewer response to the removal of the ramps is determined by how visible the removal is to the motorist. The Richmond Street ramp is not that visible from SR-163 northbound and southbound lanes. It is relatively hidden by existing vegetation. Since the removal of the ramp would most likely generate moderate negative viewer response during construction, after planting, this response would be low.

Maintenance Landscape Issues

Along with the higher than average accident rate, another safety issue is that of Department maintenance personnel who must accomplish various maintenance activities. Currently, it is difficult to perform any type of maintenance activities within the project limits due to narrow shoulders and lack of accessibility. Maintenance personnel usually require complete closure of the facility to conduct all of the necessary substantial maintenance tasks simultaneously; this situation impacts traffic in the region.

Additional elements discussed previously and proposed for future implementation, which do not have the potential for significant impacts individually or cumulatively to the visual resources of the corridor, include:

- Replacement of the Irrigation System.
- Replacement of the Fencing.
- Replacement/Introduction of Traffic Monitoring Stations.
- Repair/Rehabilitation of Retaining Wall at Robinson Avenue.

3.2.4 Visual Impact Mitigation

The elements of the proposed project, slope paving, MVPs and pavement removal at the abandoned ramp present impacts from a visual perspective that are only considered significant prior to mitigation in a cumulative context, and they can be mitigated to a level below significance.

- The slope paving would add new concrete under existing structures. Mitigation for this new feature would include concrete that would be colored to give an aged appearance to match the existing concrete conditions.

- The introduction of MVPs would add new areas of pavement, changing the character of the corridor. The MVPs would be placed strategically to minimize their appearance and to mitigate for their addition to the corridor.

The Department proposes to enhance the surrounding viewshed by entering into a Cooperative Agreement with the City of San Diego. Two proposed sites for planting are included in the cooperative agreement. They include the archery range south east of the Laurel Street Bridge and the Marston Addition (Figure 17). Tree planting shall be at a minimum of 200 trees per 0.4 hectare (one acre) with 15 gallon sized trees. The Department and the City of San Diego shall determine tree species, maintenance and irrigation requirements.

Slope Paving

Mitigation for slope paving will include:

- Existing concrete features within the Historic District shall be surface treated to match the concrete from of the original highway construction.

- All new concrete structural elements and paving shall be given an aged appearance to resemble the concrete of the original highway construction.

- Landscape areas and irrigation around the paving that was disturbed by construction shall be replaced and repaired

- Determine the appropriate type of slope paving would be treated to give an aged appearance that match similar elements within the corridor.

- Landscape areas and irrigation around the paving that was disturbed by construction shall be replaced and repaired

Maintenance Vehicle Pullouts (MVPs)

Within the Historic Parkway/District mitigation for MVPs will include:

- Surface treatments of existing concrete features within the Historic District, particularly the new median barrier and planter at the north end of the Historic District, to match the aged appearance of the concrete from the original highway construction.

- All new concrete structural elements and paving shall be given an aged appearance to resemble the concrete of the original highway construction.

- Landscape areas and irrigation around the paving that was disturbed by construction shall be replaced and repaired.

Outside the Historic Parkway/District mitigation for MVPs will include:

- Determine the appropriate type of paving that matches similar types of paving within the corridor (refer to the concept plan in the SR-163 Corridor Management Plan).

- Landscape areas and irrigation around the paving that was disturbed by construction shall be replaced and repaired.

Maintenance Access Road

Mitigation for the Maintenance Access Road will include:

- Enhancing the corridor by planting trees and other plantings in and around the viewshed of SR-163.

- Entering into a Cooperative Agreement with the City of San Diego to enhance the park character along the viewshed of SR-163. Two sites are to be included in the cooperative agreement. They include, the archery range south east of the Laurel Street Bridge and the Marston Addition (or other areas within the viewshed that the City of San Diego and Department deems appropriate for planting). Tree planting shall be at a minimum of 200 trees per 0.4 hectare (one acre) with 15 gallon-sized trees. Irrigation shall be a complete bubbler water system using a solar irrigation controller or equal. The City of San Diego and Department shall determine species, maintenance, and irrigation requirements.

- Replace and upgrade existing irrigation per timeline proposed in the SR-163 Corridor Management Plan.

Irrigation System

Mitigation for the installation of the irrigation system will include:

- Replant any ground cover disturbed or removed by construction.
- Conceal all irrigation equipment as much as possible

Retaining Wall Replacement

Mitigation for the retaining wall replacement will include:

- Any new walls would be treated to give the concrete an aged appearance. The appearance should match the color and texture as that found on the structures and walls constructed in the 1940's.

- Existing wall areas will be cleaned and planting replaced.

Fencing

The fencing would be replaced in kind within the Historic Parkway and District.

Median Barrier:

Mitigation for the median barrier will include:

Alternative 1

- Replant the grassy median with an acceptable grass species determined by the Department's District Landscape Architect.

- Replant trees removed from the median over the past 25 years with boxed species of Coast live oak, California sycamores and Lombardy poplars (part of the historic plantings within the median).

- Determine the condition of the median trees, remove diseased trees and replace in kind. Prune trees as needed to enhance growth and health.

- Enter into a Cooperative Agreement with the City of San Diego to enhance the park character along the viewshed of SR-163. Two sites for planting are to be included in the cooperative agreement. They are, the archery range south east of the Laurel Street Bridge and the Marston Addition. Remove dead trees in these areas where needed. Tree planting shall be at a minimum of 200 trees per 0.4 hectare (one acre)(272 trees). Irrigation shall be a complete bubbler water system using a solar irrigation controller or equal. The Department and the City of San Diego shall determine species, maintenance and irrigation requirements.

- Since median barrier would be the first project feature implemented, the original irrigation system could be affected by the barrier installation and require removal.

    1. Replace the irrigation at the south end barriers and at the north end (if necessary)
    2. Replant south end barrier
    3. Rehabilitate north end barriers and replace dead or dying vegetation

- Given an aged appearance to north end barriers by using an acid wash applied to the external surface of the barriers to match the appearance of the concrete on the highway structures from the 1940's.

Median Barrier Alternatives 2 and 3

- Replant the grassy median with an acceptable grass species determined by the Department's District Landscape Architect.

- Replant trees removed from the median over the past 25 years with boxed species of Coast live oak, California sycamores and Lombardy poplars (part of the historic plantings within the median).

- Determine the condition of the median trees, remove diseased trees and replace in kind. Prune trees as needed to enhance growth and health.

- Enter into a Cooperative Agreement with the City of San Diego to enhance the park character along the viewshed of SR-163. Two sites for planting are to be included in the cooperative agreement. They include the archery range south east of the Laurel Street Bridge and the Marston Addition. Remove dead trees in these areas where needed. Tree planting shall be at a minimum of 200 trees per 0.4 hectare (one acre) with 15 gallon-sized trees (544 trees). The Department and the City of San Diego shall determine species, maintenance and irrigation requirements.

- Since median barrier would be the first project feature implemented, the original irrigation system could be affected by the barrier installation and require removal.

- Rehabilitate the current raised median barrier plantings at the north (between Robinson Street and Pascoe Street Overcrossing) and south end of the corridor.

    1. Replace the irrigation at the south end barriers and at the north end (if necessary).
    2. Replant south end barrier.
    3. Rehabilitate north end barriers and replace dead or dying vegetation.

- Give an aged appearance to the north end barriers by using an acid wash applied to the external surface of the barriers to match the highway structures from the 1940's.

- Remove the "kudzu" German ivy and replant with acceptable plant material as specified within the SR-163 Corridor Management Plan.

Pavement Removal at Abandoned Ramp

Mitigation for pavement removal at the abandoned ramp location will include:

- Providing maintenance access, planting with trees, shrubs and ground covers and providing adequate irrigation.

Traffic Monitoring Stations (TMS)

Mitigation for the installation of TMS will include:

- Concealing all traffic monitoring stations behind guardrails, under bridges, behind bridge pillars and columns, next to maintenance vehicle pullouts or other areas accessible to maintenance that is not visible by the highway user.

- Coloring all stations a dark color determined by the Department's District Landscape Architect, in areas where they are visible.

3.2.5 Cumulative Visual Impacts

The implementation of the proposed project would have cumulative visual impacts within the Historic Cabrillo Parkway and Historic District. The changes within the Historic Cabrillo Parkway and Historic District will have higher visual concern than those areas outside. In addition to the historic designations, this segment of SR-163 is within Balboa Park and also has a scenic highway designation. Because of the high resource quality and character and the anticipated high viewer response to changes within this section of the park, any changes could be significant. There have been several previous Department projects, which have had a contributing effect to changes of this corridor's historic elements. These include the seismic retrofitting of the bridges and a median barrier installation at the north end of the historic district. In addition, a recently approved pavement rehabilitation project, which includes relocating curbs, guardrails and the widening of the shoulders at select locations, will contribute to the overall cumulative impacts to the corridor.

The project would be implemented (pavement rehabilitation and the installation of the guardrail) as proposed, has potentially significant cumulative impacts to the Historic Cabrillo Parkway and District. Therefore, potentially compromising the integrity of the Historic Parkway and Historic District.

A higher evaluation needs to be considered within the Historic District and Parkway due to it sensitive character and resource. Therefore, the rating used to offset the potential significant impact to the Historic District and Parkway received a higher weight in the evaluation of their visual impacts. In reviewing each of the projects' potential visual impacts, the degree of the overall visual impacts was taken into consideration.

In considering all of the proposed projects and work to be completed within the Corridor over the next 10 to 12 years, cumulative impacts would occur only if there are permanent changes to the Historic District and Parkway without mitigation. Since many of the proposed project changes

are minimal, the cumulative visual impacts associated with their implementation are not considered significant.

The Summary of Visual Impacts Table (Table 1), located at the end of this chapter, helps to evaluate this cumulative impact and provide a method that gives a value to the ratings for the projects.

3.3 Cultural Resources

"Cultural resources" as used in this document refers to historic and archaeological resources. Under California law, cultural resources are protected by the California Environmental Quality Act (CEQA) as well as Public Resources Code Section 5024.1, which established the California Register of Historic Places. Section 5024.5 requires state agencies to provide notice to, and to confer with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historic resources (Table 2)

Cultural studies for the DEIR involved the preparation of a Historical Resources Compliance Report (HRCR), which addresses the Corridor Management Plan (CMP) for State Route 163 through Balboa Park, City of San Diego, California. Gloria Scott and Frank Lortie, Department architectural historians, reviewed the document. The State Historic Preservation Officer (SHPO) is currently reviewing the HRCR. Their concurrence and/or comments on cultural resources will be included in the final EIR.

Cultural resource analysis efforts focused on the Cabrillo Freeway California Register Historic Parkway/District. The Department previously evaluated this portion of SR-163 in connection with separate, federally funded seismic retrofit undertakings (Rosen 1996, 1997). Frank Lortie and Dorene Clement (1996), Department architectural historians, prepared the historical resource evaluation report in connection with that work. National Register of Historic Places and California Register of Historical Resources status was determined in connection with those proposed seismic projects and confirmed by SHPO on December 20, 1996.

The corridor is a completely built, modified environment, as such, an archaeological survey for the project was deemed inappropriate and was not undertaken. There is no original ground within the right of way, which began to be modified during the early 1900s. The potential for historical archaeology was explored, but the public features that once existed within the corridor from the 1915 and 1935 expositions have long since been removed or buried so deeply that they would not be encountered by construction of any CMP undertaking. No archaeological sites of any type have ever been recorded within the corridor, as confirmed by a records searches conducted at the South Coastal Information Center (San Diego State University) and San Diego Museum of Man.

The CMP projects roughly correspond with the limits of the Cabrillo Freeway California Register Historic District. The Historic District includes a 2.6km (1.6mi) segment of State Route 163, from roughly 90m (300ft) south of the Cabrillo Bridge, to a point just south of the 6th Av. on-ramp Undercrossing (UC); the east and west boundaries of the Historic District are the Department's right of way limits.

The contributing elements to the Historic District include:

- The Roadway
- The Landscaping
- Cabrillo Bridge, #57-0215, built in 1915
- Quince Street Overcrossing (OC), Bridge #57-0216K, built in 1947
- Richmond Street OC, Bridge #57-0217Z, built in 1947
- Upas Street Pedestrian OC, Bridge #57-0218, built in 1947
- Robinson Av. OC, Bridge #57-0219, built in 1942
- University Av. OC, Bridge #57-0085, built in 1947
- Washington Street OC, Bridge #57-0220, built in 1942
- Washington Street/Sixth Avenue Separation, Bridge #57C-0009 (City of San Diego bridge), built in 1940
- Pascoe Street on-ramp OC, Bridge #57-0221, built in 1947

Non-contributing elements to the Historic District include:

- Traffic signs
- Median barriers
- Guardrail
- Sixth Avenue on-ramp UC, Bridge #57-0222, built in 1947, modified in 1979
- Route 8/163 Separation North, Bridge #57-0239F, built in 1947
- San Diego River Bridge, #57-0126, built in 1946, modified in 1970

Subsequently, the City of San Diego Historical Resources Board listed the Historic District as local landmark #441 in September 2000. Then in August 2002 Governor Gray Davis signed legislation (AB 3035§3.284.) that designated the portion of State Route 163 from PM 0.5/3.0 (KP 0.8/4.8) as the *Cabrillo Historic Parkway*.

Because the proposed project involves State-only funding, this DEIR covers cultural resource compliance in accordance with State Public Resources Code Part 5024.5 and CEQA Section 21084.1. Future undertakings may include federal funding and if this occurs those projects would have to comply with the requirements of Section 106 of the National Historic Preservation Act, and its regulations as promulgated in Part 36 Code Federal Regulations Section 800, and in accordance with the *Programmatic Agreement among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation (Council), the California State Historic Preservation Officer (SHPO), and the California Department of Transportation (Department) regarding Compliance with Section 106 of the National Historic Preservation Act (NHPA), as it pertains to the Administration of the Federal-Aid Highway Program in California*, which became effective January 1, 2004.

The CMP specifically covers that portion of SR-163 through Balboa Park from PM 0.9/3.7. The proposed project element that would be built first, the median barrier, covers PM 1.2/2.4. The California Register Historic District and *Cabrillo Historic Parkway* cover somewhat similar limits of SR-163, 1.34/2.8 and 0.5/3.0, respectively. The Area of Direct Impacts (ADI) for the median barrier project is completely within the historically designated portion of SR-163, except for the proposed tree replanting areas in adjacent Balboa Park (Archery Range and Marston

Addition). Some of the other project elements proposed occur both within and outside the Historic Parkway/District.

The proposed project elements are listed below by Department functional area, with potential impacts to the Historic Parkway/District discussed (see also Table **2**).

Safety Features

This functional area includes barriers, bridge rails, traffic signing, traffic monitoring stations, and maintenance vehicle pullouts (MVPs).

Median Barriers

Besides a federally funded pavement rehabilitation project previously approved for 2004, the other major proposal for next year within the Historic District is the installation of a "Steel-Backed Timber Guardrail" (SBTG) along both outside edges of the grassy median, at or near the edge of the traveled way. Coupled with the median barrier is the replanting of trees in the median, which have been lost to age, disease, or traffic accidents in the past 15+ years. Additional tree replanting would take place within Balboa Park as mitigation for visual impacts that the new barrier would be creating. Median tree replanting is necessary to maintain the integrity of the National/California Register Historic District; but has not been possible in the past because of the Department's 9 meter (30 foot) setback standard requirement.

There is probably no other undertaking that could change the look of the California Register Historic District more than the median barrier. The barrier design, tree replanting in the median and Historic American Engineering Record documentation serves to reduce the CEQA impacts to less than significant. By doing this, the historical resource would retain its eligibility to the California Register.

Median barrier alternatives have addressed two main issues: (1) horizontal placement of the barrier in relation to the traveled way i.e. at 0.6 meter (2 feet) and the 1.2 meters (4 feet); and (2) the style of the barrier. A number of existing Department-approved barrier types were evaluated and rejected as non-context sensitive solutions. The SBTG has been used in the eastern U.S. and has been approved by the FHWA. The Department, during approximately one year of analysis studied the design and performance during crash tests to confirm its effectiveness for use on California highways. The SBTG was then presented to a number of groups and agencies for their review; in every case agreement was reached that it was the most sensitive barrier design for the Historic Parkway/District.

The location of the barrier in relation to the traveled way had to be evaluated. At 0.6 meter (2 feet), the barrier would be close to the edge of the traveled way. At 1.2 meters (4 feet) two alternatives are being considered, one that leaves the ground between the edge of the traveled way and the face of the barrier as bare earth, and a second that treats the ground with a type of cemented earth-colored material that restricts the growth of weeds.

A final median barrier alternative is the No Project. Under this scenario there would be no changed to the landscaped median. Even under this condition, the Department could be presenting an impact to the historical resource through neglect. The Department would allow the trees in the median, a significant contributing element of the Historic Parkway/District, to

disappear over time. The median barrier project would allow for replanting trees in the median, thus maintaining this significant component of the historical resource.

Traffic Signing

This project proposes the placement of a "low vertical clearance" decal to the side of the Upas Street pedestrian/equestrian overcrossing. This decal would add a feature to the bridge that has never previously existed there. This change would have a cultural impact that could be mitigated to a less than significant level by proper recordation of the bridge beforehand.

Outside agencies and some preservation groups have asked the Department to consider changing the signage within the Historic District to cream-colored lettering on brown backgrounds. Such a change would require many Department design exceptions. Signs are specifically not considered contributing elements to the Historic District because they are changed continually over time and are not original to the roadway. The public is accustomed to seeing cream-colored lettering on brown signs in certain settings where they announce parks or historic resources nearby. Changing warning, speed limit, directional, and other signs to these colors would introduce elements into the corridor that have never existed there before.

Traffic Monitoring Stations (TMSs)

TMS are about half the size of a refrigerator and painted dark green; while their exact locations are not known at this time, they would be placed within the landscape and at locations to soften their visible appearance. Seven new TMS are proposed, but only two occur within the Historic Parkway/District. TMSs are viewed as not causing any adverse change to the historical resource.

Maintenance Vehicle Pullouts (MVP's)

MVPs would be located in areas deemed appropriate within the corridor to hide and soften their visible appearance. They would be paved with asphalt to match the adjacent roadway shoulders, and their number would be kept to no more than six to avoid creating an adverse change to the Historic Parkway/District.

Landscaping

None of the landscaping projects would cause an adverse change to the Historic Parkway/District. They would all enhance the existing vegetation, and provide for its continued growth and longevity.

Several other planting projects are proposed within the corridor: In 2004 German Ivy infestations would be removed and those areas replanted with appropriate non-invasive species. Additionally, tree replanting in the median would occur once the SBTG is in place. All plantings would be done with a palette appropriate to the original landscaping efforts in the 1940s and 1950s.

It must be stressed that the ultimate design of any landscaping within the Historic Parkway/District would be done in accordance with: The Department's 1999 *General Guidelines for Identifying and Evaluating Historic Landscapes*; National Register publication *Preservation Brief 36: Protecting Cultural Landscapes*; The Secretary of the *Interior's*

Standards for the Treatment of Historic Properties. Any future landscaping project would be reevaluated in accordance with CEQA Section 21084.1 and PRC Section 5024.5, or Section 106 of the national Historic Preservation Act should it be federally funded.

Other Corridor Features

Retaining Walls

There is one retaining wall at the Robinson Street entrance ramp to SR-163 southbound that may need to be replaced. Existing walls would be replaced in-kind with matching materials and treated to give an aged appearance to a match the color and texture as that found on existing structures and walls constructed in the 1940s. At present no new walls are proposed for the corridor. As long as the work on retaining walls is carried out as described above, their repair or replacement in-kind would not create any cultural resource concerns.

Slope Paving

This project proposes to replace paving where deterioration is a significant factor in looks and condition. Slope paving throughout the project limits is minimal. Bare ground is under some of the bridges. It is proposed that slope paving where it might be added, under bridges and ramps would be done with PCC treated to give an aged appearance and match the color and texture of the adjacent structures.

Existing gore areas are a mixture of stamped concrete (south end of SR-163) and concrete (north end of SR-163) outside the historic corridor, and asphalt within much of the historic corridor. This undertaking received concurrence from FHWA and SHPO in 2000 that the changes to the Historic District were not adverse. No mitigation was required as a consequence of that undertaking. No other gore modification projects are proposed.

Right of Way Fencing

Right of way fencing would be replaced in-kind; none is original to the 1940s, and fencing is not a contributing element to the Historic District/Parkway and not a cultural resource concern.

3.3.1 Cumulative Cultural Resource Impacts

Based on the work of Lortie and Clement (1996), the Cabrillo Freeway was found eligible for listing on the National Register of Historic Places and for placement on the California Register of Historical Resources under criteria A and C: Under criterion A "for its association with the development of the freeway system of the San Diego metropolitan area, …as the first freeway in the region, [and because of] …its status as the cornerstone in the complex network of freeways that has characterized transportation in the region for four decades" (Lortie and Clement 1996:25); and under criterion C "…for its elaborate landscaping and how it still expresses the design concepts that influenced the state's first generation of freeway planners. The Cabrillo Freeway [possesses] a high degree of historic integrity both for representing the early four-lane freeway plan and for reflecting early highway landscape planning concepts" (ibid.).

The Cabrillo Historic Parkway/District was considered significant: under the historic theme of Transportation, sub-theme of Freeway Development; for the period from 1940 to 1948; and at the state and local levels (ibid.:22). Lortie and Clement (ibid.:21-22) also stated that the freeway

was significant because: it is one of the earliest freeways in the region; of the vital link it provided between the downtown business and civic center districts and post-war residential development and expansion of the military facilities to the north on Kearny Mesa; it represents the ideals and expectations of those who planned the first freeways in the state and possibly in the nation; it is among the first generation of freeways that were constructed in the late 1930s through 1940s; its attractive landscaping represents one of the essential qualities of these early freeways; and it is a remarkably well preserved example of the first generation of freeways or parkways constructed in the 1930s and 1940s that emphasized landscape beautification as well as transportation efficiency.

The following is a list of all existing and proposed changes within the SR-163 Historic Parkway/District:

Alterations prior to 1996, including approved projects not yet implemented

- Grind original PCC surface.
- Add concrete median barriers at north and south ends of the Historic District.
- Add and replace, as needed, fencing, guardrails, signage, landscaping, irrigation, and lighting.

Alterations from 1996 to present, including approved projects not yet implemented

- Sixth Street Separation – seismic retrofit of concrete bents, original square piles were redone as cylindrical piles, then encased in a square steel shell to "replicate" the originals' squared appearance – resulting in piles that are larger and have a steel skin.

- Richmond Street Overcrossing – Piles on the concrete bents were enlarged with a concrete exterior shell as part of seismic retrofit work.

- Quince Street Overcrossing – two bents altered by placing a concrete shear wall between the concrete piles.

- Washington Street Overcrossing – Square steel sheathing placed over the original square concrete columns for seismic retrofit

- Roadway – shoulders widened to standard 2.4 meters (8-foot) widths at various locations.

- Gore points at a number of locations – shortened.

- Removal of approximately 240 Red Gum Eucalyptus trees due to Lerp Psyllid infestation, and replacement of trees where sufficient room exists.

- Speed limits signs – changed from 105 kilometers per hour (65 miles per hour) to 88 kilometers per hour (55 miles per hour).

- Signage at both ends of the historical resource – added announcing driver now entering "Historical Route 163 – Historic Cabrillo Parkway."

- Signage throughout historical corridor – added additional curve warning signs and swap other signage around, change directional green signs to retroreflective green signs.

- Drainage inlet – replacement.

- Crash barrier cushions – replacement.

- Metal Beam Guard Rail (MBGR) – replacement.

For the purposes of CEQA it was necessary to assess whether any of the proposed project elements would result in the physical demolition, destruction, relocation, or alternation of the resource or its immediate surroundings such that the significance of the historical resource is materially impaired. The Cabrillo Historic Parkway/District would not be "totally" demolished, destroyed, or relocated as a result of any proposed project elements. While the project elements being proposed include everything from extremely minor changes (irrigation) to more major additions (median barrier) changes, none of them individually and cumulatively, including the already approved pavement rehab, signing, and eucalyptus tree replacement projects, materially impair the Historic Parkway/District or its surrounding environment to a point where it would no longer be eligible for listing in the California Register (or the National Register, or designation as the *Cabrillo Historic Parkway* or landmark designation by the City of San Diego). A large number of the project elements are designed to enhance or restore the historic corridor landscaping; some of the proposed project elements are for motorist and highway worker safety; and only a few involve bringing aspects of the roadway up to current design standards. Design exceptions are required on a number of the project elements specifically for the purposes of retaining the integrity of the historic corridor. Table 2 lists the proposed project elements and how their consequent impacts to the Historic Parkway/District would be reduced to a level below significance.

Generally, as applied under CEQA, it has been assumed that if a project follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*, the project would be considered to have mitigated to less than significant its impacts to historical resources [CEQA Guidelines, Section 15064.5(b)(3)]. Most of the projects avoid significant impacts by following the *Standards* (using in-kind replacements), and in designing the proposed project elements to avoid (design exceptions) or minimize impacts to the historical resource. The preparation of Historic American Engineering Record (HAER) documentation would provide a permanent record of the Cabrillo Historic Parkway/District, as it exists today. The same HAER documentation could be used for all remaining CMP projects once they are brought on-line. Doing HAER now would capture the historic corridor data before any changes are made, and would provide a tremendous cost savings for future projects.

Only the placement of the Steel-Backed Timber Guardrail (SBTG) involves the introduction of a major design feature into the Historic Parkway/District that currently does not exit there. It can be argued quite reasonably that other changes have also done this and yet their cumulative effect was still not enough to alter the characteristics and historic importance of the resource to the point where it would not qualify for listing on the California Register. These changes were all made to the resource prior to Lortie and Clement's evaluation in 1996. They include two median barriers, one at each end of the historic corridor, and grinding of the original concrete roadway surface to provide for greater vehicular stability during wet conditions. Possibly for these very

reasons Lortie and Clement explicitly stated that the barriers within the district do not contribute to its significance, and there is no mention in their report about the actual roadway surface, other then the fact that it remains (and would remain) PCC. It must be recognized that roadways in highly urbanized environments are continually upgraded over time for motorist safety and as design standards are changed. Signs, barriers, concrete, asphalt, vegetation, are changed all the time, and many such changes have occurred within the Cabrillo Historic Parkway/District over the last 55+ years. Still, for the purposes of PRC Section 5024.5, this addition to the historic corridor must be viewed as an adverse effect. State law requires the use of all possible planning to develop a prudent and feasible alternative that results in avoiding this adverse change to the resource. The only way to avoid this adverse effect would be not to build the barrier. This would not address the need to increase motorist safety, prevent collisions with trees and bridge columns, and to allow tree planting in the median.

None of the proposed project elements, or those that have occurred since 1996, would so materially impair the resource's integrity as to affect its eligibility in the California Register. There are no projects proposed that impact any of the bridges within the Historic Parkway/District. All landscaping-related activities only serve to restore and enhance the vegetation. The two-lane roadway remains intact, and would retain all seven aspects of integrity (materials, workmanship, feeling, association, setting, location and design).

Based on the above analysis it is concluded that none of the proposed project elements, individually or cumulatively, so materially impair the historical resource so as to require its removal from any historic register or designation. Most of the project elements can avoid an adverse effect finding under PRC Section 5024.5 by being mitigated to a level below significance through design, placement, in-kind replacement, context-sensitive solutions, and HAER documentation. Therefore, and for the purposes of CEQA, none of the CMP projects result in a substantial adverse change to the Cabrillo Historic Parkway/District.

3.4 Growth

The California Environmental Quality Act (CEQA) requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…."

The Balboa Park Master Plan discusses expansion that would not encroach into the open park land, landscaped areas or plazas. Expansion would not be approved until adoption of a final Master Plan, Financing Plan, and Precise Plans, which would determine allowable building envelopes and architectural design guidelines for all Park facilities (Balboa Park Master Plan 1989).

Induced Growth

The areas adjacent to the proposed project limits are designated as Urban Park/Open Space. Any new growth inducing construction would be under the Balboa Park Committee and the City of San Diego jurisdictions.

This project is not capacity increasing and would not cause growth to occur.

3.5 Farmlands/Agricultural Lands

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

There are no farmlands or agricultural lands near SR-163 within the proposed project limits.

3.6 Community Impacts

Under the California Environmental Quality Act an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

The Balboa Park Committee has the duty to advise on policy issues relating to the acquisition, development, maintenance, and operation of the Balboa Park area.

The Balboa Park Committee, the City of San Diego Historical Resources Board, Save Our Heritage Organisation, the Citizens Coordinate for Century 3 and Department staff were part of the Safe and Scenic Advisory Committee that was formed in 1999 to address issues on the SR-163 corridor. Their various comments were incorporated into the writing of the CMP.

Environmental Justice

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. The Department's commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendices of this document (Appendix C).

No minority or low-income populations have been identified that would be adversely affected by the proposed project as determined above.

The proposed project is not capacity increasing and no new right-of-way would be required. Therefore, no relocations would be necessary and no minorities would be disproportionately affected.

3.7 Utilities/Emergency Services

The proposed project would not require any relocation of utilities. Night work may require one lane to be closed during construction. Police, ambulance, and fire departments in the area would be contacted regarding closures during construction.

3.8 Traffic and Transportation/Pedestrian and Bicycle Facilities

The Upas Street Pedestrian/Equestrian overcrossing is within the project limits but no work is proposed at this location.

3.9 Water Quality and Storm Water Run-off

The Porter Cologne Water Quality Act (California Water Code Section 13000 et seq.) requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or ground waters of the state. Waste discharge requirements resulting from the Report are issued by the appropriate regional water quality control board.

A National Pollution Discharge Elimination System (NPDES)/Storm Water Compliance Report was prepared for this DEIR.

Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System (NPDES) permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. To ensure compliance with Clean Water Act Section 402 the State Water Resources Control Board (SWRCB) has issued a NPDES Statewide Storm Water Permit to regulate storm water discharges from Department facilities. The permit regulates storm water discharges from the Department right-of-way both during and after construction, as well as from existing facilities and operations.

In addition, the SWRCB has issued a construction general permit for most construction activities covering greater than 1 acre (0.40 hectare), that are part of a Common Plan of Development exceeding 5 acres (2.02 hectare) or that have the potential to significantly impair water quality. Some construction activities may require an individual construction permit. All Department projects that are subject to the construction general permit require a Storm Water Pollution Prevention Plan (SWPPP), while all other projects require a Water Pollution Control Program (WPCP). Subject to the Department's review and approval, the contractor prepares both the SWPPP and the WPCP. The WPCP and SWPPP identify construction activities that may cause pollutants in storm water and measures to control these pollutants. Since neither the WPCP nor the SWPPP are prepared at this time, the following discussion focuses on anticipated pollution controls.

The Storm Water Management Plan (CTSW-RT-01-024), otherwise known as the SWMP, describes the Statewide program to reduce discharges of pollutants associated with the drainage systems that serve the highways and highway-related properties, facilities and activities. It identifies how Department would comply with the NPDES Permit (Order No. 99-06-DWQ) issued by the State Water Resources Control Board (SWRCB) on July 15, 1999.

Section 3 and 4 of the SWMP describes the three BMP categories that meet either the Maximum Extent Practicable (MEP) requirements or the Best Conventional Technology/Best Available Technology (BAT/BCT) requirements. The categories identified in the SWMP are:

Category I – Technology-based controls to meet MEP requirements Group B: Design pollution prevention BMPs - BMPs applicable to the design of new facilities or major renovations of existing facilities (i.e., permanent soil stabilization, ditch channel lining systems, etc.)

Category II – Temporary construction BMPs for construction projects that disturb 5 acres or more, but can be applied to sites smaller than 5 acres. BMP's to meet BAT/BCT requirements.

Category III – Treatment controls to meet MEP requirements.

CATEGORY IB:

DESIGN POLLUTION PREVENTION BMPS

Consideration of Downstream Effects Related to Potentially Increased Flow
Preservation of Existing Vegetation
Concentrated Flow Conveyance Systems
Ditches, Berms, Dikes and Swales
Overside Drains
Flared Culvert End Sections
Outlet Protection/Velocity Dissipation Devices
Slope/Surface Protection Systems
Vegetated/Hard Surfaces

CATEGORY II:

CONSTRUCTION SITE BMPs

The selected BMPs are directed at reducing pollutants in storm water discharges and eliminating non-storm water discharges. The categories for these controls are listed below:

Temporary Soil Stabilization

- Sandbag Barrier
- Fiber Rolls
- Gravel Bag Berm
- Check Dam
- Desilting Basin
- Sediment Trap/Basin

Temporary Sediment Control

- Hydraulic Mulch
- Hydroseeding
- Soil Binders
- Straw Mulch
- Geotextiles, Mats/Plastic Covers and Erosion Control Blankets
- Scheduling

Preservation of Existing Vegetation
Temporary Concentrated flow Conveyance Controls

- Earth Dike/Drainage Swales and Lined Ditches
- Outlet Protection/Velocity Dissipation Devices
- Slope Drains

Wind Erosion/Sediment Tracking Control

- Street Sweeping and Vacuuming
- Stabilized Construction Entrances

Waste Management

- Spill Prevention and Control
- Solid Waste Management
- Hazardous Waste Management
- Contaminated Soil Management
- Concrete Waste Management
- Sanitary/Septic Waste Management
- Liquid Waste Management

Materials Pollution Control

- Material Delivery and Storage
- Material Use

CATEGORY III: APPROVED TREATMENT BMPs

- Biofiltration: Strips/Swales
- Infiltration Basins
- Detention Devices

Traction Sand Traps

Dry Weather Flow Diversion

To help work towards incorporating BMPs into a project, the Department has a set of manuals called *Caltrans Storm Water Quality Handbooks.* The volumes that would be most helpful are the *Planning and Design Staff Guide,* 2002 and *Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual* and *The Construction Site Best Management Practice (BMP) Manuals,* 2003. Employees working on roadway construction or highway planting projects will have access to copies of these publications. That also applies to all consultants contracted to produce PS&E packages.

On July 15, 1999 State Water Resources Control Board, SWRCB, adopted Order 99-06 DWQ, National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from Department properties, facilities, and activities.

This project would be designed in conformance with NPDES requirements. Department Guidance documents would be used to assess any potential storm water issues. Best Management Practices (BMPs) that would reduce or eliminate run-off of sediment or other contaminants from the proposed work area during construction would be given priority consideration on this project. Post-construction BMPs would be implemented as a standard practice whenever feasible.

3.10 Geology/Soils/Seismic/Paleontology/Topography

Topographic and geologic features are protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. The current policy is to use the anticipated Maximum Credible Earthquake (MCE) from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

The proposed project would not create impacts to the geology, seismic, or topography of the SR-163 corridor.

3.11 Hazardous Waste/Material

Many state and federal laws regulate hazardous materials and hazardous wastes. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Aerially Deposited Lead (ADL) is of concern in the project area. The source of the ADL along SR163 comes from historically high average daily traffic number which have resulted in deposits of lead from tailpipe emissions when leaded gasoline was still being used.

3.12 Air Quality

The Transportation Project – Level Carbon Monoxide Protocol (Protocol) by the Institute of Transportation Studies at University of California, Davis 1997 was used to determine the necessary procedures for this project's air quality analysis. The procedures and guidelines detailed in the Protocol comply with the following regulations without imposing additional requirements:

- Section 176(c) of the 1990 Clean Air Act Amendments
- Federal Conformity Rules
- State and Local Adoptions of the Federal Conformity Rules
- National Environmental Policy Act
- California Environmental Quality Act
- (CEQA) Requirements [Cal. Code Regs., tit. 21 § 1509.3(25)]

The Protocol is applicable for the assessment of potential air quality impacts associated with a proposed project as identified within the scope of this Draft Environmental Impact Report. Only those projects that are likely to worsen air quality necessitate further analysis. Criteria that has been used to determine if this proposed project is likely to worsen air quality is as follows:

a. The project significantly increases the percentage of vehicles operating in cold start mode.
b. The project significantly increases traffic volumes.
c. The project worsens traffic flow.

Answers to the above criteria in relation to this proposed project were negative to all criteria scenarios. In accordance with this review of the Protocol, the proposed project is exempt from all emissions analysis and no air quality study is necessary.

3.13 Noise

The California Environmental Quality Act provides the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

Type 1 projects are subject to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects,* October 1998. A Type 1 project is defined as a highway project for the construction of a highway on a new location, or the physical alternation of any existing highway, which significantly changes either the horizontal or vertical alignment, or increases the number of through traffic lanes. This project is not a Type 1 project and is therefore not subject to the Protocol.

Construction Impacts

Construction noise is only substantial in exceptional cases, such as pile driving and crack and seal pavement rehabilitation operations. These activities will not be used during construction of the proposed project.

3.14 Biology

This section discusses natural communities of concern, biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

A biological study was conducted in April of 2003. Due to the habitat quality, no sensitive species were observed during the survey and none are anticipated.

The Migratory Bird Treaty Act (16 U.S.C. 703-711) is a treaty with Canada, Mexico and Japan making it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season

In order to avoid potential impacts to migratory or nesting birds, no trees will be removed or pruned during the bird-breeding season (March 1 to August 31). If this window is not feasible, a staff biologist will be notified prior to any work in order to direct field crews accordingly.

3.15 Wetlands and Other Waters of the United States

There are no wetlands or other waters of the U.S. within the proposed project limits.

3.16 Vegetation

None of the species on the California list of noxious weeds is currently used by the Department for erosion control or landscaping in the SR-163 corridor.

Currently, there are non-native, invasive species included in the vegetation originally planted in Balboa Park. The original plant palette did not take into account the detrimental effects of non-native and invasive plant and tree species on the native plant habitat. The German Ivy would be removed and replanted.

3.17 Wildlife

The SR-163 corridor is not considered a wildlife corridor due to the lack of native habitat and the chain link fence preventing animal movements across the canyons.

3.18 Threatened and Endangered Species

California has enacted a state law, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game (CDFG) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. The CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Therefore, no sensitive species were observed during the biological survey conducted in April 2003. No endangered species are anticipated within the project limits.

3.19 Construction Impacts

Construction noise would be a temporary impact to surrounding areas. See Table 3 below.

Table 3 - Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Level (dBA) at 15 meters
Scrapers/Graders	80 to 84
Backhoes	72 to 94
Front Loaders	72 to 93
Compacters (Rollers)	73 to 75
Pavers	86 to 88
Trucks	83 to 94
Concrete Mixers	75 to 87
Compressors	75 to 86
Jackhammers/Rock Drills	82 to 98
Saws (Concrete)	84 to 86

Suggested Abatement Measures:

The contractor is required to comply with the State's Standard Specifications (Section 7-1.01I) and the local jurisdiction's noise ordinance requirements. In addition the following measures are recommended:

- Portable equipment shall be located as far as possible from the noise-sensitive locations as it may be possible.
- Construction vehicle staging areas and equipment maintenance areas shall be located as far as possible from noise-sensitive locations.
- Use newer equipment with improved noise muffling will ensure that all machinery have the manufacturer's recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational.
- Turn off idling equipment.
- Implement a construction noise monitoring program to limit the impacts to residents.
- Plan noisier operations during times of least impact to sensitive receptors.
- Maintain good public relations with the community to minimize objections to the unavoidable construction impacts. This can be achieved by notifying adjacent residents in advance of construction work.
- Battery powered night signs and signals should be used in lieu of gasoline-powered units.

3.20 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130 describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines.

The proposed actions would be mitigated by the installation of proposed new landscaping.

- Introduction of the median barrier.
- Introduction of slope paving.
- Introduction of MVPs.
- Pavement removal at the abandoned ramp location.

All of the above represent changes to the context and features of the visual and historic resources. However, the mitigation proposed would include:

- Median barrier that is compatible and contributing to the visual quality of the corridor.
- Landscaping in the median, shoulders, and off-site mitigation areas.
- Landscaping at the abandoned ramp location.
- Slope paving that would be treated and given an aged appearance to integrate with the concrete from the original roadway construction.
- Complete document of the Historic District in accordance with the guidelines of the Historic American Engineering Record (HAER).
- Placement of MVPs and traffic monitoring stations at locations that minimize their intrusiveness on the visual and historic qualities of the corridor.
- Replacement "in-kind" for elements either removed and replaced or added to the Historic Parkway District.
- Acid-wash to give an aged appearance to the concrete median barrier at the north end of the Historic District.

Summary of Impacts

While median barrier would detract from the historic significance of the corridor, it would not jeopardize the corridor's listing on local, state and federal registers. Mitigation measures proposed include the barrier type selection and the restoration of median landscaping. The SBTG is proposed as a measure that balances visual integration while also addressing an important safety element of the corridor. The re-introduction of landscaping into the median provides for visual mitigation as well as helping to restore historical features of the corridor. Additional landscaping at the two proposed mitigation sites, the Marston Addition and the Archery Range would add to the scenic quality of the corridor by adding additional landscaping within the views of traffic on SR-163 (Figure 17).

Median Barrier Placement Mitigation

The 0.6 meter (2 feet) Median Barrier Placement Alternative would disturb 0.55 hectare (1.36 acres) of the median. Mitigation has been determined by Landscape Architecture's standard grid specifications at 200 trees per acre. Therefore, 0.55 hectare (1.36 acres) multiplied by 200 trees per acre, would equal 272 trees to be planted as mitigation.

The 1.2 meters (4 feet) Median Barrier Placement Alternative would disturb 1.1 hectares (2.72 acres) of the median. Therefore, using the formula above, 1.1 hectares (2.72 acres) multiplied by 200 trees per acre, would equal 544 trees to be planted as mitigation.

The No Project alternative would not require mitigation.

3.21 Areas of Controversy

Placement of anything new, especially a median barrier, within this stretch of SR-163 has been met with substantial public concern and opposition. The Department has conducted outreach efforts, beginning with in formation of the Safe and Scenic Advisory Committee in an attempt to resolve concerns and the oppositions raised by the public. The CMP was prepared in direct response to some of the concerns voiced by the public and stakeholders. The proposed barrier type, Steel Backed Timber Guardrail, stems from these outreach efforts. The communication and coordination with the public is an ongoing process and would continue throughout the environmental documentation and project development process.

3.22 The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Implementation of the proposed project would result in short-term effects from construction activities.

Build Alternatives

The build alternatives would have similar effects to the SR-163 corridor and the surrounding areas as follows:

Short-term losses include:

- Construction impacts such as noise, visual impacts and traffic delays.

Short-term benefits include:

- Increased jobs and revenue generated during construction.

Long-term losses include:

- Use of construction equipment and materials.

Long-term benefits include:

- Increased safety for the motoring public, maintenance personnel, and California Highway Patrol.
- Enhanced visual quality of the corridor.
- Restoration of landscaping and preservation of historic elements
- Improved flow of traffic from improved directional signage.

No Project Alternative:

The No Project alternative would not result in short-term losses but would contribute to the deterioration of the landscaping and high fatal accident rate within the SR-163 corridor.

3.23 Irreversible and Irretrievable Commitments of Resources

Implementation of the proposed project action involves a commitment of fiscal resources that are irreversible and irretrievable.

- Loss of fossil fuels used during construction activities.
- Loss of public funds of approximately $10,800,000 for implementation of the various project features being proposed.

No Project Alternative

- Would result in no irreversible loss of resources.
- Would potentially lead to further accidents, loss of life and property.

3.24 Summary of Public/Agency Involvement

Additional Public Outreach

An open house public scoping meeting was held at the War Memorial Building in Balboa Park on October 15, 2003. This meeting was held in order to present the proposed project elements to the public (Appendix B).

Agency Involvement

The two proposed mitigation sites, as well as, a maintenance access road, are under City of San Diego (City) ownership. The Department is currently negotiating a Co operative Agreement with the City for access to the proposed mitigation sites and the maintenance access road. Approval of the Co operative Agreement, between the Department and the City, would be critical to implementing some of the proposed mitigation measures and providing maintenance personnel with a dedicated access point.

Through submittal of the Historic Resources Compliance Report (HRCR) the State Historic Preservation Officer (SHPO) determines the severity of impacts to resources associated with the proposed project. The SHPO review of the HRCR is concurrent with the circulation of this DEIR. The SHPO concurrence determination will be included with the Final EIR.

The CMP was developed through the cooperation and investment of many person-hours encompassing input from almost all Department functional areas, including Landscape Architecture, Design, Minor Projects, Environmental, Traffic Operations, and Maintenance; also contributing their input were a number of outside agencies and groups. These included:

- State Historic Preservation Officer.
- Balboa Park Citizen's Advisory Committee.
- Balboa Park Design Review Subcommittee.
- City of San Diego, (then) Councilperson Christine Kehoe and staff.
- Safe and Scenic Design Review Committee, established by Christine Kehoe and then Councilperson Judy McCarty.
- City of San Diego (then) Councilperson Judy McCarty and staff.
- City of San Diego Historical Resources Board.
- Save Our Heritage Organisation
- Citizens' Coordinate for Century Three

Table 1 - Project Features Visual Impact Summary

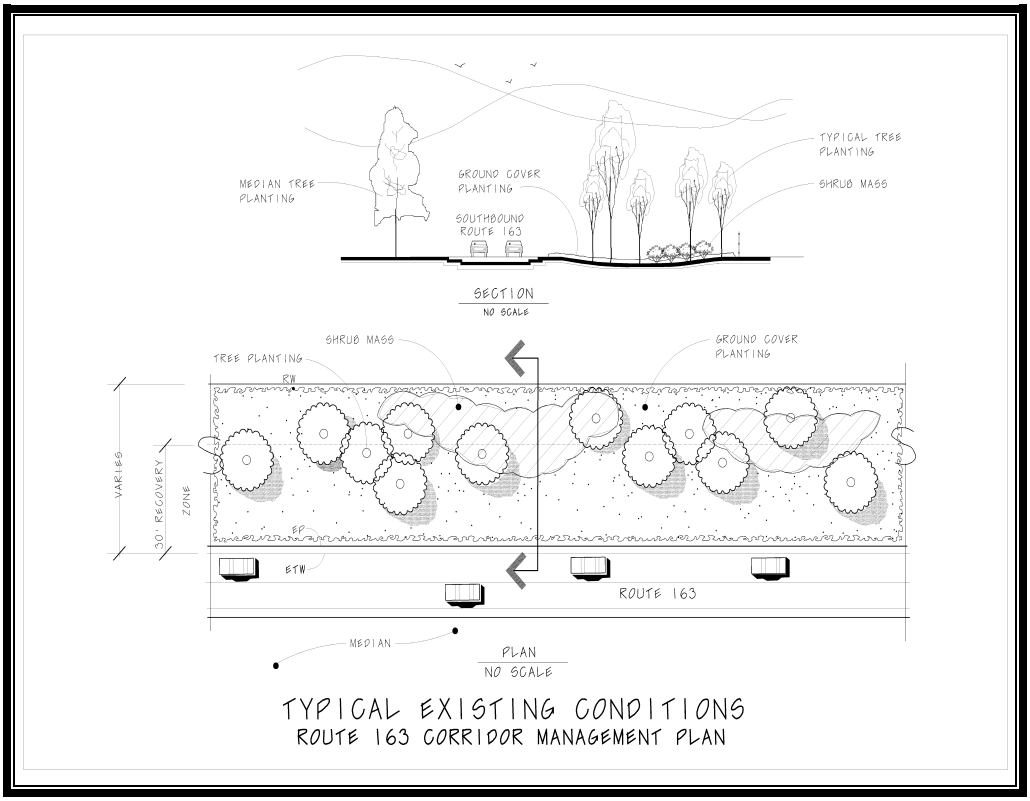
Project Features	Inside Historic District	Outside Historic District	Overall Feature Impact
Landscape	**MH to H**	**MH**	**MH**
Maintenance Access Path	**MH to H**	**MH**	**MH**
Irrigation	**L**	**L**	**L**
Lighting	**N/A**	**N/A**	**N/A**
Walls	**L**	**L**	**L**
Slope Paving	**MH**	**M**	**MH**
Fencing	**L**	**L**	**L**
Barriers			
Alternative 1 - 0.6 m. from Traveled Way (TW)	**MH**	**N/A**	**MH**
Alternative 2 - 0.6 m. paved & 0.6 m. not paved (1.2 m. from TW)	**H**	**N/A**	**H**
Alternative 3 - 1.2 m. paved (TW)	**H**	**N/A**	**H**
Alternative 4 - No Guardrail	**N/A**	**N/A**	**N/A**
Bridge Rails	**N/A**	**N/A**	**N/A**
Traffic Signing	**M**	**L**	**M**
Traffic Monitoring	**M**	**L**	**M**
Maintenance Vehicle Pullouts	**MH**	**M**	**MH**
Abandoned Equipment and Appurtenances	**N/A**	**L** 1-5/SR-163 Aband.Ramp	**M**
Cumulative Column Impact	**M**	**M**	**M**
Overall Project Impact	**Moderate Visual Impact**		

Legend
L=Low
M=Moderate
MH=Moderately High
H=High
N/A = Not Applicable

*Note: Each element in the barrier alternative was used once in the overall column and factored into the overall rating.

Table 2 - Proposed SR-163 CMP Projects and Mitigation Recommendations*

Project	Mitigation
Landscaping, remove and replace German Ivy	Replace with plant palette appropriate to 1940s-1950s
Landscaping rejuvenation projects	Replace with plant palette appropriate to 1940s-1950s
Landscaping abandoned on-ramp at I-5/SR-163 Interchange	HAER** documentation, replace with plant palette appropriate to 1940s-1950s
Median barrier and tree replanting	HAER documentation, replace with plant palette appropriate to 1940s-1950s
Upas Street POC vertical clearance sign	HARE documentation
Traffic monitoring stations	Locate where they would not be noticeable to the motorist
Maintenance vehicle pullouts	Locate where they would not be noticeable to the motorist
Irrigation system upgrade	None
Pavement rehab	Replacement in-kind
Lighting	Replacement in-kind
Retaining walls	Replacement in-kind
Slope paving	HAER documentation, replacement in-kind, plant with palette appropriate to 1940s-1950s
Fencing	Replacement in-kind
*Reduces the impacts to a level below "significant". **HAER = Historic American Engineering Record.	


MEDIAN TREE PLANTING
GROUND COVER PLANTING
SOUTHBOUND ROUTE 163
TYPICAL TREE PLANTING
SHRUB MASS
SECTION
NO SCALE
SHRUB MASS
TREE PLANTING
RW
GROUND COVER PLANTING
VARIES
30' RECOVERY ZONE
EP
ETW
ROUTE 163
MEDIAN
PLAN
NO SCALE
TYPICAL EXISTING CONDITIONS
ROUTE 163 CORRIDOR MANAGEMENT PLAN

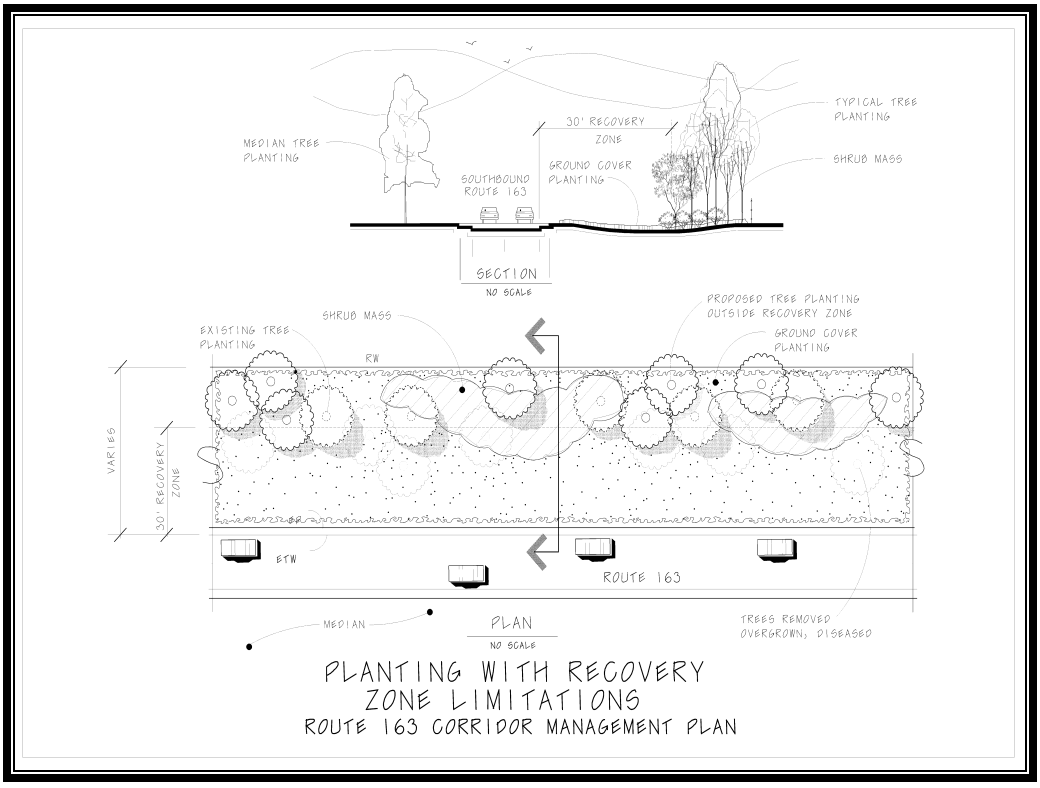

MEDIAN TREE PLANTING
30' RECOVERY ZONE
SOUTHBOUND ROUTE 163
GROUND COVER PLANTING
TYPICAL TREE PLANTING
SHRUB MASS
SECTION
NO SCALE
EXISTING TREE PLANTING
SHRUB MASS
RW
PROPOSED TREE PLANTING OUTSIDE RECOVERY ZONE
GROUND COVER PLANTING
VARIES
30' RECOVERY ZONE
EP
ETW
ROUTE 163
MEDIAN
PLAN
NO SCALE
TREES REMOVED OVERGROWN, DISEASED
PLANTING WITH RECOVERY ZONE LIMITATIONS
ROUTE 163 CORRIDOR MANAGEMENT PLAN

FIGURE 16

Click to view …

FIGURE 17
MITIGATION MAP

FIGURE 17